

**Biodiversity Duty:
Phase 1 Habitat Survey of
National Waterfront Museum, Swansea**



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Introduction

Biodiversity is a core component of sustainable development, underpinning economic development and prosperity, and has an important role to play in developing locally distinctive and sustainable communities. From 1 October 2006, all public authorities in England and Wales have a Duty to have regard to the conservation of biodiversity in exercising their functions. The Duty aims to raise the profile and visibility of biodiversity, clarify existing commitments with regard to biodiversity, and to make it a natural and integral part of policy and decision making. The Duty is set out in Section 40 of the Natural Environment and Rural Communities Act (NERC) 2006 which states: *“Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity”*.

As part of the museum’s response to the legislation, biodiversity audits are being carried out at its sites. In this report, a Phase 1 habitat survey of the National Waterfront Museum, Swansea is presented. The Phase 1 habitat survey technique is the standard system for classifying and mapping wildlife habitats (including urban areas) in Britain (Nature Conservancy Council 1989; Wyatt 1991). The aim of the survey is to provide information about the nature, location and extent of semi-natural habitats to direct decision making and conservation effort effectively. Sites are mapped reasonably rapidly by visiting each parcel of land and mapping the vegetation, usually at the scale of 1:10,000, according to about ninety specific habitat types using standard colour codes. More detailed notes (“target notes”) are made on areas of interest. The surveys can then be used to determine areas for more detailed survey, to indicate areas of value for nature conservation, and to provide a simple baseline for monitoring change in the future.

Methods

The museum grounds were mapped on 3 April 2009 in cold and cloudy weather following the Phase 1 survey manual (Nature Conservancy Council 1989). The area surveyed is shown in Figure 1; the scale is larger than normal for Phase 1 due to the small size of the site.

Results

The following habitats were present (Figure 1):

J.1.2 Amenity Grassland

There are three areas of amenity grassland landscaped with flower beds and planted trees (Target notes 2-4). The grassland is relatively species-poor (most is three years old at most) and c. 3 cm tall with a few dandelions, white clover, daisy and beaked hawk’s-bit.

The bank adjacent to Swansea Museum is older and richer, with red clover, knapweed and silverweed.

J.1.4 Flower beds and shrubberies

The flower beds and shrubberies are either mulched with bark or covered with ivy, with very few weeds (Target note 1).

J.5 Other habitat – Paved areas

The area around the museum is either paved with a tarmac-like cover or with block paving. The block paving has a few ephemeral spring weeds between the cracks and against walls (Target note 5). Some gravel beds adjacent to walls also have a few weeds.

Target Notes (for locations see Figure 1)

1. Shrubbery by outdoor theatre (Figure 2)
Mixed shrubbery with planted trees (Lombardy Poplar, birch, field maple), ground with bark mulch, few weeds. Polypody growing on poplar. Staff report that rats are frequently seen here. A few saplings of goat willow and Swedish Whitebeam present.
2. Amenity grassland with trees (birch, beech, Acer, palm; Figure 3)
Mown, short, trampled amenity grass. Bases of trees in beds with ivy, the ivy climbing on the trees has been killed.
3. Amenity Grassland on east side of museum (Figures 4 and 5)
Large area of uniform, mown amenity grassland over sandy soil. Mainly grass with occasional white clover and dandelion. Occasional patches re-sown with seed. Row of planted birches and another of oaks. Flower beds with ornamental grasses. Bank at east end is older grassland and more diverse, has potential for invertebrates.

4. Courtyard in Museum (Figure 6)
Mown amenity grassland, shrubbery against fence, and flower beds. Fence at east end with ivy. Block paving with a few weeds around edges.
5. Waterfront on south side (cover photograph and Figure 7)
Block paving with very few weeds – pearlwort, glabrous whitlow-grass, annual meadow-grass, groundsel etc.

Discussion

As might be expected for museum grounds in a city centre which have been recently landscaped, there are no natural habitats present and the habitats that are present are of little of interest for nature conservation. The museum grounds are maintained under contract, with grass areas cut regularly, and gravel areas and flower beds maintained by hand weeding. Most amenity grassland has been recently laid and is very species-poor. The only area of potential interest is the older grassland on the bank adjacent to Swansea Museum which is more species-rich (though still botanically poor) than the other amenity grasslands.

There is very little potential for enhancement of the biodiversity without compromising the urban landscape design and amenity use, or allowing the museum surrounds to become unacceptably scruffy and weedy. The amenity grassland has been laid out to show the lines of the old railway sidings, and therefore needs to be kept short to maintain this feature. One possible option might be to allow the grassland on the bank adjacent to Swansea Museum to develop longer, more diverse grass by cutting only once or twice a year in late summer/autumn.

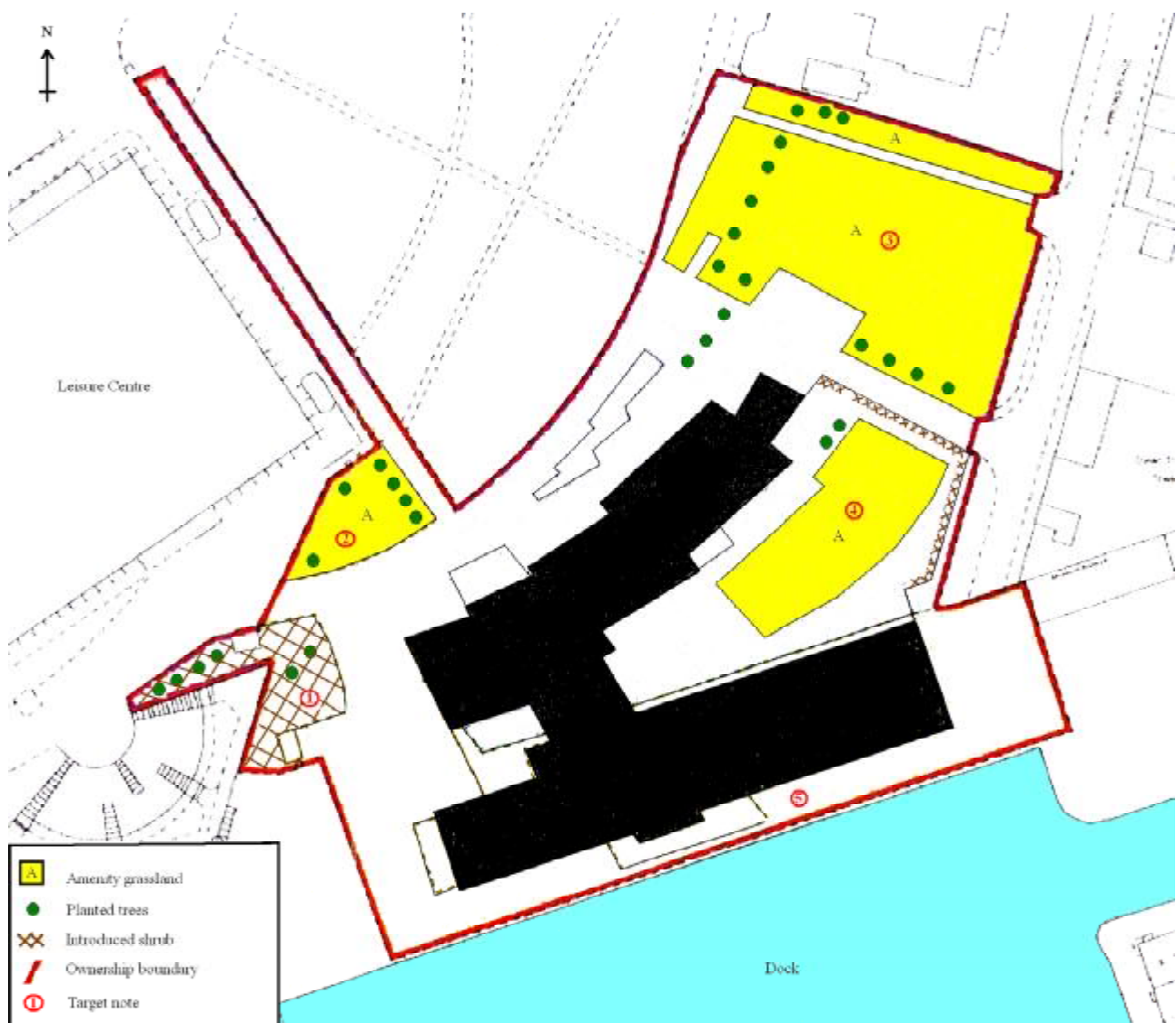


Figure 1. Area surveyed. The site boundary is shown in solid red. Places mentioned in the text are also shown.



Figure 2. Shrubbery by theatre (Target note 1).



Figure 3. Amenity grassland with trees (Target note 2)



Figure 4. Mown amenity grassland to east of museum (Target note 3).



Figure 5. Mown amenity grassland by east side of museum (Target note 3).



Figure 6. Courtyard of museum (Target note 4)

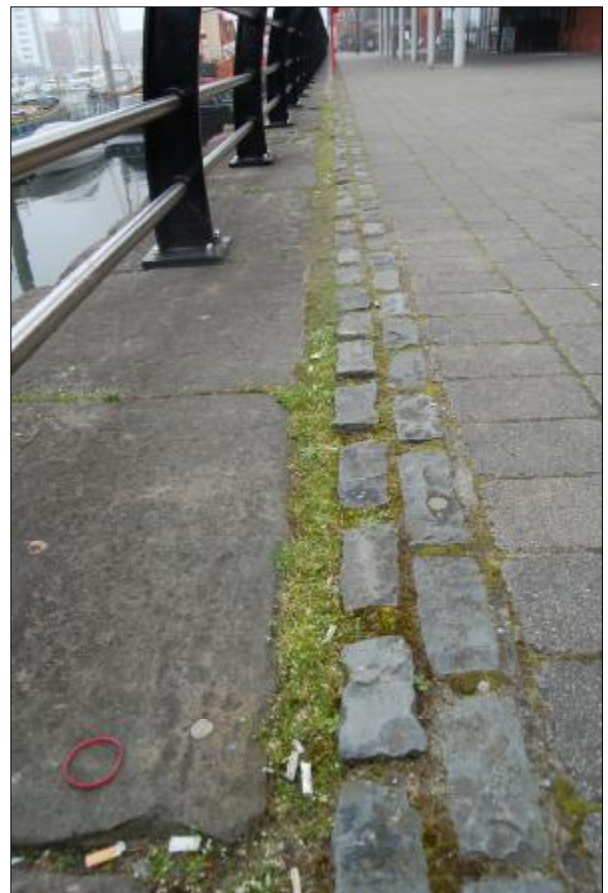


Figure 7. Ephemeral species in cracks in paving (Target note 5)

References

- Nature Conservancy Council (1990). *Handbook for Phase 1 habitat survey - a technique for environmental audit*. England Field Unit, Nature Conservancy Council, Peterborough.
- Wyatt, G. (1991). *A review of Phase 1 habitat survey in England*. England Field Unit, Nature Conservancy Council, Peterborough.